

Work Order ID 84164

May-07-12 8:42:49 AM

84164

Page 1

Item ID: D2891-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: 2.25 Support
 Start Date: 07/05/2012 Start Qty: 20.00 ***20*** Cust Item ID:
 Required Date: 04/06/2012 Req'd Qty: 20.00 ***20*** Customer:
 Reference:

Approvals: Process Plan: ML5 Date: 12/05/07 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2891	B								
100	HAAS CNC VERTICAL MACHINING #1	0.00							
100									
HAAS I	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA046 2-Deburr								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

b/po

12/05/16

20

FK

12/05/17

b/po

12/05/16

20

FK

12/05/17

ml

12/05/22

20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

84164

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Cust Item ID:

Start Date: 07/05/2012 **Start Qty:** 20.00

20

Customer:

Required Date: 04/06/2012 **Req'd Qty:** 20.00

20

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

**Insp.
Stamp**

0.00

130

0.00

HandFXtube

Memo

Hand Finishing Crosstubes

Per note 8 on page 1 of dwg D2891, Prep inner concave surface of support and apply 3M Scotch-Weld as per dwg. 24H of cure time.

0.00

140

0.00

QC

Memo

Quality Control

0.00

170

0.00

Packaging

Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 84164

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Item ID: D2891-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: 2.25 Support

Start Date: 07/05/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 04/06/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

12/5/23

MF 12-05-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

May-07-12 8:42:54 AM

Page 1

Work Order ID: 84164

84164

Parent Item: D2891-1

D2891-1

Parent Item Name: 2.25 Support

Start Date: 07/05/2012

Required Date: 04/06/2012

Start Qty: 20.00

Required Qty: 20.00

Comments:

IPP C02.11.26Added P/OKJ

IPP D 08.03.19 Re-format EC verified: DD

IPP Rev:E

11.08.04 as per dwg rev.B DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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DSK076

Manufactured

No

110

Each

13.0000

0.5

10

DSK076

PD

12/05/15

D2891-1 TURNING DETAIL

Location

Loc Qty

Loc Code

MAT

-10

MAT050

20

 82701

10

MAT060

3

77192

3

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	84164
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article
 ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		0.190	0.189	0.190	0.190	0.190
AB	0.240	0.260		0.250	0.250	0.249	0.247	0.250
AC	0.115	0.150		0.127	0.127	0.126	0.127	0.125
AD	0.040	0.060		0.055	0.056	0.055	0.056	0.054
AE	0.010	0.020		0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310		0.290	0.290	0.300	0.300	0.300
AH	0.115	0.150		0.139	0.140	0.138	0.140	0.138
AI	0.454	0.474		0.461	0.461	0.464	0.464	0.460
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042		1.040	1.041	1.040	1.037	1.036
AM	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262		0.257	0.257	0.257	0.257	0.257
AO	1.663	1.683		1.678	1.675	1.682	1.682	1.677
AP	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042		0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: Pd/la Date: 12/05/16

Audited by: mf Date: 12/05/22

Prototype Approval: _____ Date: _____

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	84164
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1 ₆	2 ₇	3 ₈	4 ₉	5 ₁₀
HAAS Section								
AA	0.188	0.193	0.190	0.190	0.190	0.189	0.190	0.190
AB	0.240	0.260	0.251	0.251	0.250	0.249	0.249	0.249
AC	0.115	0.150	0.127	0.127	0.128	0.127	0.127	0.127
AD	0.040	0.060	0.050	0.050	0.056	0.053	0.052	0.053
AE	0.010	0.020	0.010	0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260	0.250	0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310	0.295	0.295	0.295	0.295	0.295	0.295
AH	0.115	0.150	0.140	0.140	0.138	0.139	0.140	0.139
AI	0.454	0.474	0.456	0.456	0.458	0.458	0.457	0.457
AJ	2.779	2.789	2.784	2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260	0.250	0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042	1.040	1.040	1.037	1.041	1.039	1.042
AM	0.053	0.073	0.063	0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262	0.257	0.257	0.257	0.257	0.257	0.257
AO	1.663	1.683	1.675	1.675	1.675	1.675	1.675	1.678
AP	0.053	0.073	0.063	0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042	0.032	0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: PO/B.A	Date: 12/05/16
Audited by: [Signature]	Date: 12/05/22
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	[Signature]

DART AEROSPACE LTD		Work Order:	84164
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	11	12	13	14	15
HAAS Section								
AA	0.188	0.193		0.189	0.189	0.189	0.190	0.189
AB	0.240	0.260		0.250	0.250	0.249	0.250	0.250
AC	0.115	0.150		0.126	0.126	0.126	0.126	0.127
AD	0.040	0.060		0.049	0.053	0.050	0.050	0.051
AE	0.010	0.020		0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310		0.295	0.295	0.295	0.295	0.295
AH	0.115	0.150		0.141	0.140	0.141	0.139	0.139
AI	0.454	0.474		0.458	0.458	0.458	0.458	0.458
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042		1.041	1.042	1.041	1.042	1.038
AM	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262		0.257	0.257	0.257	0.257	0.257
AO	1.663	1.683		1.676	1.675	1.675	1.677	1.678
AP	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042		0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: PO/K.A.	Date: 12/05/16
Audited by: 9.4	Date: 12/05/22
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD		Work Order:	84164
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	\times_{16}	\times_{17}	\times_{18}	\times_{19}	\times_{20}
HAAS Section								
AA	0.188	0.193	0.189	0.189	.189	.189	.189	.189
AB	0.240	0.260	0.250	0.250	.250	.250	.250	.250
AC	0.115	0.150	0.127	0.127	.127	.127	.127	.127
AD	0.040	0.060	0.049	0.049	.050	.050	.050	.050
AE	0.010	0.020	0.010	0.010	.010	.010	.010	.010
AF	0.240	0.260	0.250	0.250	.250	.250	.250	.250
AG	0.290	0.310	0.295	0.295	.295	.295	.295	.295
AH	0.115	0.150	0.140	0.140	.140	.141	.141	.141
AI	0.454	0.474	0.458	0.458	.455	.457	.457	.457
AJ	2.779	2.789	2.784	2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260	0.250	0.250	.250	.250	.250	.250
AL	1.002	1.042	1.041	1.041	1.041	1.041	1.035	1.035
AM	0.053	0.073	0.063	0.063	.063	.063	.063	.063
AN	0.257	0.262	0.257	0.257	.257	.257	.257	.257
AO	1.663	1.683	1.677	1.677	1.677	1.677	1.675	1.677
AP	0.053	0.073	0.063	0.063	.063	.063	.063	.063
AQ	0.022	0.042	0.032	0.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject				✓	✓	✓	✓	✓

Measured by: PGH/FR- 12/05/17	Date: 12/05/16
Audited by: [Signature]	Date: 12/05/22
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	[Signature]

NOTES:

1) MATERIAL: 17-4 PH STAINLESS STEEL, H900 OR H925 CONDITION
MIN UTS = 170 KSI (38 HRC)
(REF DART SPEC. D6104)

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 (REF X.XXX = ± 0.010) UNLESS OTHERWISE NOTED

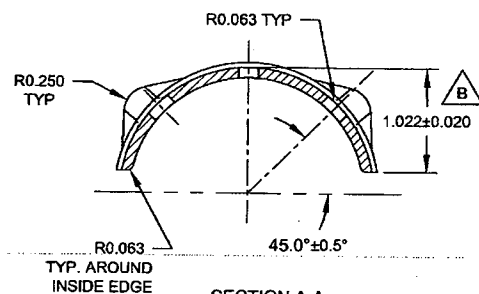
4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

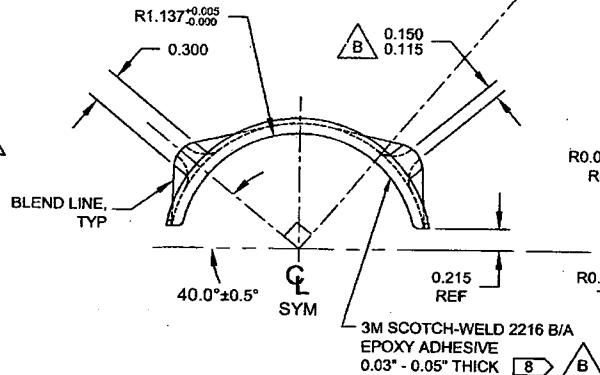
6) IDENTIFICATION: DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP, PER DART QSI 044 6.3.

7) WEIGHT: 0.38 lb

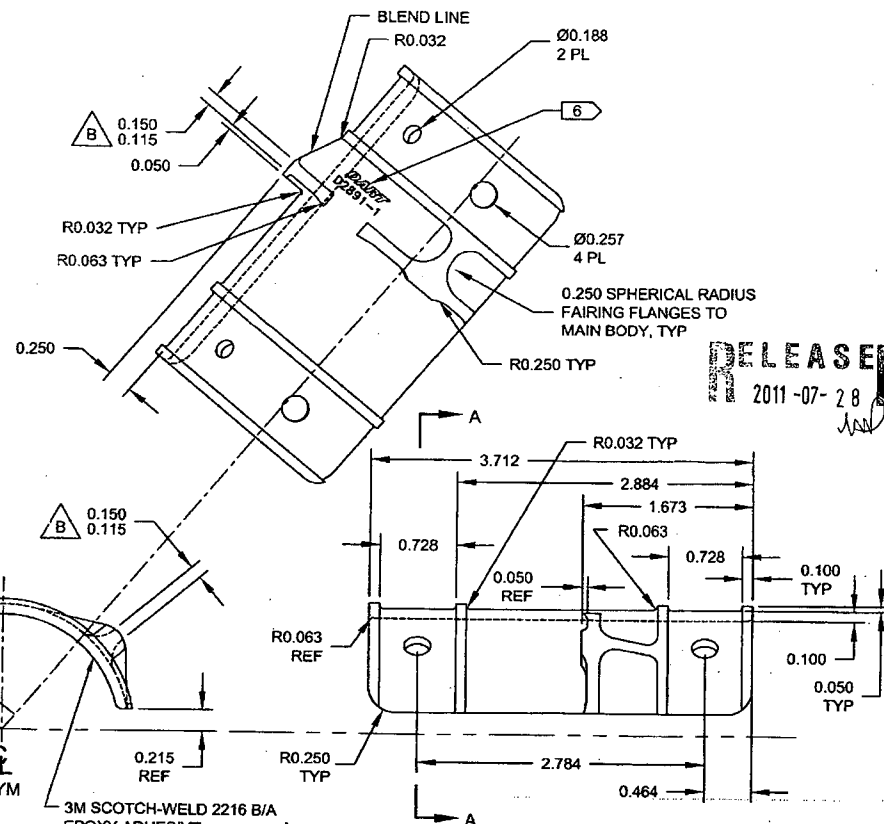
8) FOR THE ENTIRE INNER CONCAVE SURFACE:
ABRADE SURFACE WITH 400-GRIT SANDPAPER. REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY 0.03" TO 0.05" THICK LAYER OF 3M SCOTCH-WELD 2216 B/A ADHESIVE TO MATING SURFACE OF SUPPORT. ALLOW TO CURE FOR 24 HOURS.



SECTION A-A



D2891-1 SUPPORT



RELEASED
2011-07-28

B	RMV FINISH, ADD 3M 2216, ADD H925 MAT'L OPTION, UPDATE TOLERANCE (ZN D4-1,B4-1,B6-1)	CP	11.07.15
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	ASS	DRAWING NO.	REV. B
MFG. APPR.		D2891	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		Ø2.250 SUPPORT	NTS
DATE	11.07.15	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 84164 MLJ
12/05/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries